



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/840,296	04/24/2001	Lee Daniel Feinberg	033337/0109	4378
22428	7590	05/17/2005	EXAMINER	
FOLEY AND LARDNER			TRAN, THIEN D	
SUITE 500			ART UNIT	
3000 K STREET NW			PAPER NUMBER	
WASHINGTON, DC 20007			2665	

DATE MAILED: 05/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/840,296

Applicant(s)

FEINBERG, LEE DANIEL

Examiner

Thien D. Tran

Art Unit

2665

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 8-12, 17, 19, 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Takahashi et al (U.S Patent No. 6,049,525).

Regarding claim 1, Takahashi discloses an optical network with at least two nodes, col.4 lines 31-39, comprising:

an optical fiber, figure 2B;

at least two active fiber-bays, col.10 lines 32-40, per LTE (node) optically coupled to said fiber; and at least one redundant Fiber-bays per node optically coupled to said optical fiber, figure 4A, wherein when an active Fiber-bay of said at least two active Fiber-bays fails, said network changes from said failed Fiber-bay to a redundant Fiber-bay of said at least one redundant Fiber-bay, and wherein the number of said at least one redundant Fiber-bays is less than the number of said at least two active Fiber-bays, figures 4 and 8, col.10 lines 26-65.

Regarding claim 2, Takahashi discloses that the Fiber-bays comprise redundant channel equipment and active SOH, PINF, SWH, and SWL (channel equipment), col.7 lines 40-55 and wherein when the active channel equipment fails within a first Fiber-bay,

said first Fiber-bay changes from said failed channel equipment to said redundant channel equipment, figure 3A.

Regarding claim 8, Takahashi discloses that the optical fiber comprises: a service transmit optical fiber W; a protect transmit optical fiber P; a service receive optical fiber W; and a protect receive optical fiber P, figure 13 B, wherein said network changes from said service transmit optical fiber to said protect transmit optical fiber when said service transmit optical fiber fails, wherein said network changes from said service receive optical fiber to said protect receive optical fiber when said service receive optical fiber fails, col.13 lines 45-60.

Regarding claims 9, 17 Takahashi discloses that the optical network is submersible optical network, figure 2.

Regarding claims 10, 11 Takahashi discloses that when a connection fails, the network changes Fiber-bays after reconfiguration and setting up process with the redundancy (waiting a predetermined amount of time after changing optical fiber), col.14 lines 45-55.

Regarding claim 12, Takahashi discloses an optical network with at least two nodes, col.3lines 13-25, comprising:

an optical fiber comprising:

a service transmit optical fiber, W line, figure 6A;

a protect transmit optical fiber; P line, figure 6A;

a service receive optical fiber, W, figure 6A; and

a protect receive optical fiber; and at least two active Fiber-bays per LTE (node) optically coupled to said fiber, 6A; and  
at least one redundant Fiber-bay per node optically coupled to said fiber, wherein said Fiber-bays, col.10 lines 32-40, comprise:

SOH a, PINF a, SWH a, and SWL a (active channel equipment), col.8 lines 50-60; and

SOH b, PINF b, SWH b, and SWL b (redundant channel equipment), wherein when a channel equipment fails, said Fiber-bay changes from said failed channel equipment to said redundant channel equipment, wherein when an active Fiber-bay fails, said network changes from said failed Fiber-bay to a redundant Fiber-bay, col.9 lines 1-43, wherein the number of redundant Fiber-bays is less than the number of active Fiber-bays, figures 4, wherein said network changes from said service transmit optical fiber to said protect transmit optical fiber when said service transmit optical fiber fails, and wherein said network changes from said service receive optical fiber to said protect receive optical fiber when said service receive optical fiber fails, col.5 lines 15-55.

Regarding claim 19, Takahashi discloses a method of transporting a signal via optical fiber, col.3lines 13-25, comprising the steps of:

transmitting an optical signal via an active optical fiber, figure 15B;  
changing to a redundant optical fiber when a cut in an active optical fiber occurs, figure 15B; and

changing to a redundant Fiber-bay (fiber bay) when an active Fiber-bay fails, wherein the number of redundant Fiber-bays is less than the number of active Fiber-bays, col.14 lines 15-25.

Regarding claim 20, Takahashi discloses the step of: changing to redundant channel equipment within an active Fiber-bay when an active channel equipment fails, col.9 lines 15-40.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3-7, 13-16, 18, 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi et al (U.S Patent No. 5,923,643).

Regarding claims 3, 4, 15, 16, 21, 22 Takahashi discloses the claim invention except for 2 redundant channels equipment per 46 or 254 active channels equipment. However, it would have been obvious matter of design choice to have 2 redundant channels equipment per 46 or 254 active channels equipment, since such a modification would have involved a mere change in the size of a switching system at each node. In re Rose, 105 USPQ 237 (CCPA 1955)

Regarding claims 5, 18, 25 Takahashi discloses the claim invention except for when the number of failed channel equipment exceeds the number of redundant

Art Unit: 2665

channel equipment provided within a given Fiber-bay, the network changes to a redundant Fiber-bay. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to the feature of adjusting the number of failed channel equipment exceeds the number of redundant channel equipment provided within a given Fiber-bay, to trigger the network changes to a redundant Fiber-bay, since it has been held that the provision of adjustability, where need, involves only routine skill in the art. In re Stevens, 101 USPQ 284 (CCPA 1954).

Regarding claims 6, 7, 13, 14, 23, 24 Takahashi discloses the claim invention that there is one redundant Fiber-bay for a number of active Fiber-bays, col.4 lines 57-67, figure 2 except one redundant Fiber-bay per eight or six or four number of active Fiber-bays. However, it would have been obvious matter of design choice to have one redundant Fiber-bay per eight or six or four number of active Fiber-bays, since such a modification would have involved a mere change in the size of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. In re Rose, 105 USPQ 237 (CCPA 1955).

### ***Response to Arguments***

5. Applicant's arguments filed 12/20/2004 have been fully considered but they are not persuasive.

Applicant argues that Takahashi does not disclose one optical fiber connecting to both active fiber bay and redundant bay. However, Examiner respectfully disagrees with the argument because according to the disclosure of the invention as shown in

figures 1 and 4, there are more than one OC-192s connecting to both active and protective fiber bays. Therefore, the optical cable described as in claim 1 is assumed as a trunk fiber cable that comprising many OC-192s. Takahashi discloses a trunk fiber cable comprises OC-192s connecting to both active and protective fiber bays, figure 6A.

### ***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Thien Tran whose telephone number is (571) 272-3156. The examiner can normally be reached on Monday-Friday from 8:30AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu, can be reached on (571) 272-3155. Any inquiry of a general nature



Art Unit: 2665

of relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-2600.

8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197.

Patent Examiner

Thien Tran

**DUCHO  
PRIMARY EXAMINER**

*Luchito*  
*5-13-05*